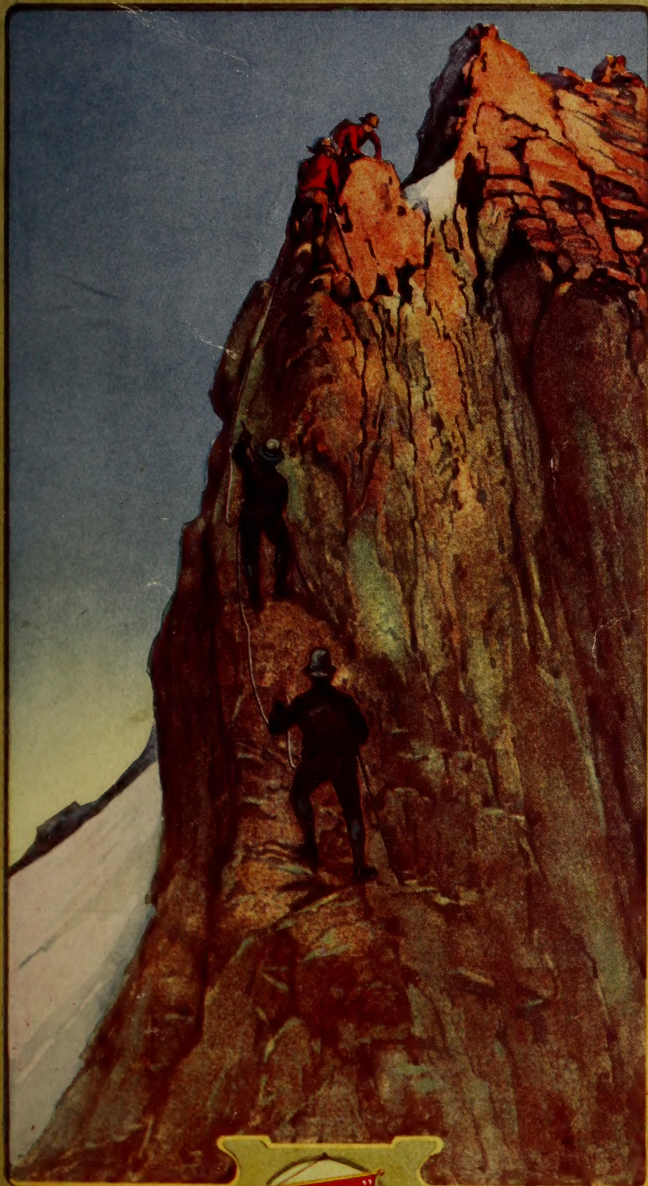


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Above the Glaciers in the Canadian Rockies



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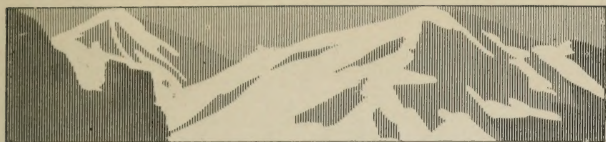
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Above the Glaciers in the Canadian Rockies





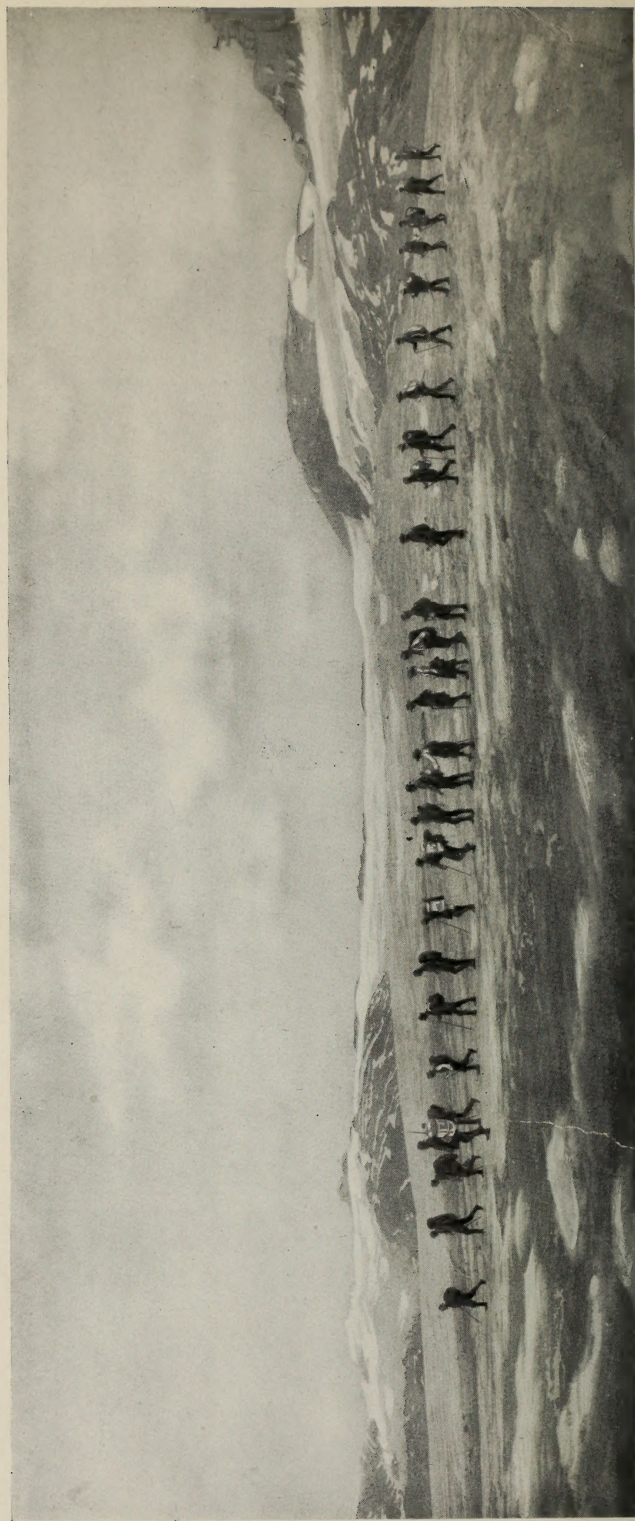
Beautiful Paradise Valley. Completely surrounded by glacier covered peaks.



Glaciers of the Canadian Rockies

DESCRPTIVE articles of a technical nature are mostly bores, but so many different ideas are entertained by tourists as to the causes of glacial ice, the life of glaciers, etc., it is perhaps necessary to say a few words in explanation of these most marvelous of nature's phenomena.

The average glacier may best be described as a vast body of ice filling some titanic mountain crevice, down which it slowly moves—the outlet of the snows which accumulate in the higher portions of the mountain crevices. In such mountainous localities the snows are even and the temperature not rising sufficiently for any considerable proportion to be melted and flow down, fill the spaces between the summits. By the pressure exerted by these vast collections the yielding material is forced through whatever opening is presented for its passage, and the great valleys leading to the base of the mountains are packed full of ice which results from the snow being solidified by pressure, or by its own melting and freezing again. This great river of ice, solid as it appears, is steadily, although almost imperceptibly urged onward until it reaches a region down the valley where the temperature is sufficiently high to melt away the fore-foot of the glacier. This fore-foot, while presenting an apparently stationary wall of ice, is constantly wasting away while the main body of the glacier is steadily advancing from the mountains. Often the fore-foot of the glacier is hollowed out through the lower layers into ice-arched channels, making caverns, which extend far back into the icy mass. The rate of progress, while dependent upon various conditions, is almost as uniform as that of a river. Careful experiments have proven the fact that the average glacier moves at the rate of 10 to 18 feet per year.



A party of mountain climbers starting out for an exploration of Wapta Glacier.



The Glaciers of the Canadian Rockies

THE glaciers of the Swiss Alps constituted the greatest known ice fields of the world until the discovery of the Canadian Rockies, but it is now admitted by the mountain-climbing fraternity that the glaciers found in the Canadian Rockies westward from Banff, Alberta, to the Pacific coast, are the greatest of them all. Only a short description of each glacial field in this territory will be given here, and they will be taken up as they are found westward from the Three Sisters, the first great peaks of the Rockies reached by the SOO PACIFIC LINE.

There are thousands of glaciers in this district, which as yet have only been observed from a long distance, and have never been thoroughly explored. Many of the most wonderful, however, are very easy of access, and of these this booklet is descriptive.

The Glaciers at Laggan

THE glacier at Laggan is one of the most interesting, having, as it does, superb Lake Louise as its foreground. It is a broad, crescent-shaped river of ice 1,300 feet above you and a half dozen miles away. It is easily reached, however, by excellent trails from the Lake Louise Chalet. Further north are other glacial fields, one of which is the source of three great trans-continental rivers flowing to the three different oceans. The Athabasca or Mackenzie river, flowing to the Arctic, the Saskatchewan to the Atlantic and the Columbia to the Pacific. This glacier presents some exceptionally interesting features,—among others an enormous cavernous passageway the size of a railway tunnel, running for miles back under the ice, cut out by a subterranean river.

Wahpta and Waputehk Glaciers

From Laggan also are excellent trails leading to the Valley of the Ten Peaks, in the midst of which lies Moraine Lake. These peaks are covered with fathomless snow, with ribboned green glaciers hanging down to the valley bed. There are also well beaten trails to the wonderful glaciers of Wahpta mountain and to the Waputehk Glacier in the direction of Hector.



A party of the Alpine Club crossing the Wapta Glacier.



Glaciers at Field and Emerald Lake

ON the way from Laggan to Field is seen an almost continuous panorama of glaciers, many of them nameless. The line clings to the mountain side at the left, and the valley at the right rapidly deepens until the river is seen as a glimmering thread five or six hundred feet below.

Looking to the right the Yoho, one of the grandest mountain valleys of the world, stretches away to the north with great white glacier bound peaks on either side; to the front, the heights of Mount Field are seen, on its shoulder is a vast shining green glacier,—the fore part of this monster, which hangs obliquely forward, measuring nearly a thousand feet in length, and its lower outer edge showing a vertical depth of almost one hundred feet.

All about Field, reached by easy trails, are many glaciers. The best known, however, are those overhanging the mountains surrounding Yoho Valley, and the mountains which rise abruptly from "Emerald Lake, the Peaceful."

The Yoho Glacier

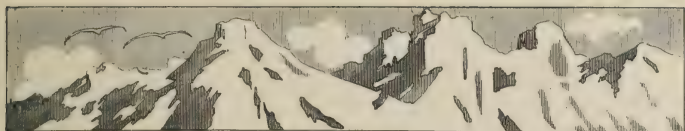
THE Yoho Glacier is one of the wonders of the Yoho Valley. This valley is now reached from the station at Field, by two splendid carriage roads and by pony trails. The Yoho Glacier is one of the greatest glacier discoveries of recent times. From its fore-foot, and stretching back for thousands of feet up the mountain side, this green river of ice surpasses all of the many other fine glaciers which cover the east face of the Emerald Mountains. In the tongue of the glacier is a tremendous ice cave, from which, during the Summer months, a tempestuous glacial current rushes, winding its way down the slope of the mountain to join the stream which flows out of Yoho Valley.

The Great Glacier

IN the Selkirks, the second great range of mountains, is the Great Glacier, one of the grandest marvels of nature, eighty-six miles beyond Mount Stephen. Within thirty minutes' walk of this wonderful sea of ice is the Glacier House.



Climbing glacier mantled Mt. Hubble.

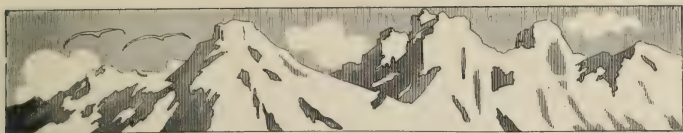


On May 29th, 1905, a party, headed by discoverer Deutschman, left the railway at Ross Peak water tank three miles west of Glacier House, making the ascent of about 1900 feet straight up the valley about a mile and a half, where the caves were located. Not only the caves themselves were found wonderful and intricate beyond description, but the surrounding country is also wild and rarely attractive in its bewildering profusion of lofty cascades, riotous rapids and lofty, snow-capped peaks. Cougar Creek is fed from the blue waters of the near-by glaciers, and the waterfall has in an immeasurable time cut the cavern and many caves out of the solid marble. The rock in which the cave is found is a very hard crystalline limestone, and at the entrance is very thick and made up of alternate bands of white, mottled and gray marble, some of the bands being impregnated with fine sharp sand. The cave was undoubtedly formed entirely by water erosion. The glacial creek of snow water is entirely free from lime salts above the cave, and its capacity therefore to dissolve lime rock when brought in contact with it is at its maximum. Through the countless years of the cave's history this has enabled the mountain torrent to carve out a mammoth channel in the solid marble, and the first entrance was made to a distance of 237 feet from the surface, the second entrance made, by means of a rope, to a depth of 70 feet below the surface, and a third opening was entered by crawling on hands and knees and descending about 50 feet, when a very large cavern was discovered, estimated to be 256 feet deep, but owing to its great extent and insufficient light was difficult to estimate. The plunge and roar of the great waterfall somewhat down in the depths reverberated in every space, producing sensations so weird that even those who had elsewhere met a counterpart were at first startled. Two days later a descent was made into the cave, and at the distance of 331 feet from the surface was found a large chamber 50 feet wide by 60 feet long, and christened "The Auditorium." The absence of all stalactite and stalagmites, such as are usually found in caves, and the presence of curiously carved marble walls, wonderfully worn in fantastic shapes and somber coloring, makes the most blasé realize that he is far removed from all things familiar. No evidence whatever was found that any portion of the cave had ever been used as a habitation by Indians or prehistoric man, or even by any wild animals.

All around Cougar Creek are high peaks and ranges, and there are two natural bridges called "Gopher" and "Mill" respectively, which are 350 feet



Beautiful Lake McCarthy, overlooked by glacier covered Mt. Biddle.



above the torrent. Some beautiful cascades tumbling down the mountain side have been named "Whistler Falls" after the famous painter. At the east end of "Mill" bridge the creek emerges into a canyon about 170 feet deep, which continues for a distance of 2,340 feet, where it ends abruptly and where Cougar Creek enters the caves. There are gouges and cuts, ravines and falls, with the blue ice cold waters swirling in basins along the ground bed of the streams, that are alone of deepest scenic interest and well repay exploration of the intrepid mountaineer. The caves have already been explored for a distance of about 6,000 feet, and discoveries of many new wonders are looked for this season.

Chalet of the Caves

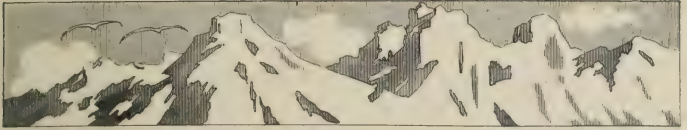
IN view of the enormous interest of the caves and surroundings for all tourists of the adventurous type, with the improved access to wonders new and marvelous, already in contemplation, is the building on the spot of a Chalet, or rest house, in the interest of further exploration, both for science and for pleasure.

Westward from Glacier, glacial fields are numerous as far as Revelstoke, the greatest, however, are those found in the territory just described. To enable visitors to climb and explore, in safety, the glaciers and peaks reached by the Soo-Pacific Railway, the company procures from Switzerland every season a company of the most expert of mountain guides. These are stationed always at Lake Louise, Field, Emerald Lake and Glacier.





The stupendous Waputehk glacier.



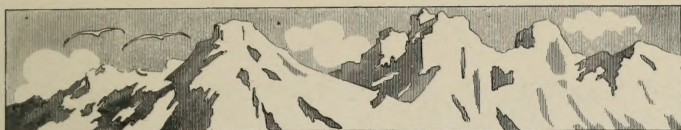
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Party of mountain climbers during the summit of "The Death Trap" Laggan.



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The glacier covered peak of Mt. Biddle.

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